CREDIT CONTROL IN SELECTED RETAIL FARM SUPPLY COOPERATIVES

Area III

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FARMER COOPERATIVE SERVICE
U. S. DEPARTMENT OF AGRICULTURE

GENERAL REPORT 43 **JUNE 1958**

Area III includes:
Wisconsin, Minnesota, North Dakota, South Dakota and Northern Iowa

FARMER COOPERATIVE SERVICE
U. S. DEPARTMENT OF AGRICULTURE
WASHINGTON 25, D. C.

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The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. The work of the Service relates to problems of management, organization, policies, financing, merchandising, product quality, costs, efficiency, and membership.

The Service publishes the results of such studies; confers and advises with officials of farmer cooperatives; and works with educational agencies, cooperatives, and others in the dissemination of information relating to cooperative principles and practices.

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Summary and Suggestions

This study--the third in a series covering different areas--provided information on policies and practices for successful control of credit by farm supply cooperatives. It covered the operations of 22 associations, handling a diversified line of supplies, located in the upper Midwest. They were doing more than one-third of their business on credit and were above average in their control of credit.

Principal Findings

Although total retail sales of these associations have increased during the last 5 years, credit sales and accounts receivable have increased more rapidly.

** Total sales increased 31 percent from 1952 to 1956 and accounts receivable increased 71 percent. In 1956, 19 days of total retail sales were tied up in accounts receivable compared with 15 days in 1952. Accounts receivable increased from 9 percent of total assets in 1952 to 10 percent in 1956. Credit sales increased from 59 percent of total sales in 1952 to 66 percent of total sales in 1956.

** These measures were based on fiscal year-end accounts receivable. Accounts on these data were only half as large as the average amount of accounts throughout the year. Days' credit sales in accounts receivable amounted to 41 days when based on year-end accounts but they were equal to 60 days when based on average accounts.

** Thirty-five percent of the accounts were less than 30 days old; 45 percent were 30 days to 6 months old; 12 percent were 6 months to a year old; and 8 percent were more than a year old.

** As credit sales and accounts receivable increase, costs of handling credit and accounts become higher, and more problems in collecting accounts occur.

** Cooperative members are aware of the increasing problems caused by credit. This is shown by the fact that credit is discussed frequently at annual meetings. Managers and boards of directors are also aware of credit problems. They are trying to counteract them by formulating new credit policies and more rigidly enforcing existing policies.

** Eleven associations had rather definite short-term credit policies stating that accounts were to be paid within 30 days. The other 11 associations had rather indefinite policies--merely stating that accounts should be paid by the end of crop-year or at the end of the fiscal-year of the cooperative.

** Nineteen associations informed patrons of their credit policy at the time of granting credit. In collecting accounts, all associations sent monthly statements and made personal visits or wrote personal letters. About half the associations used notes on some of the accounts.

** Responsibility for extending credit to new patrons rested almost entirely with the managers. Managers were also generally responsible for collecting accounts.

** Credit costs as reported by 16 of these associations amounted to 2.45 percent of credit sales and 1.54 percent of total retail sales. Interest amounted to less than half of these costs.

** Cooperatives generally did not charge for credit or give cash discounts, neither did they allocate the costs of credit entirely to the credit patrons. All patrons, however, were paying for the cost of credit in reduced patronage refunds.

** Most managers encouraged patrons to obtain credit from various credit institutions, but reported that patrons did not use them extensively because little or no charge was made for credit at the cooperatives.

** Much of the accounts receivable problem was concentrated in a few large accounts. The 10 largest account holders in each association made only about 5 percent of total purchases, but held 26 percent of the accounts receivable.

Observations

Credit policies are an important aid in controlling credit. Eleven associations with definite short-term credit policies had 14 percent of their assets in average accounts receivable, while 11 associations with rather indefinite policies had 20 percent of their assets in accounts receivable. Accounts receivable were also more current in associations with definite policies. A comparison of cooperatives grouped according to type of cropping areas and commodities handled showed that these factors did not appreciably affect either the amount or age of accounts receivable.

** A weakness in this area was the inadequacy of credit policies and a laxity in enforcing these policies. In spite of the weak policies and their lack of enforcement, however, collection efforts were quite successful and only a small percent of the accounts were over a year old or were charged off as bad debts.

** One factor generally overlooked is that an effective means of reducing credit sales and accounts receivable is to make a reasonable charge for credit. Regardless of other efforts that may be made to induce cash payments, if no charge is made for credit it is not likely that such purchases will decline.

** If members are thoroughly familiar with the cost of credit and the manner in which a cooperative operates, many will not expect "free" credit.

** Credit without a charge is still costly, especially to the patron who pays cash. The cash patron must pay for the cost of handling the credit patron's account if no charge or too small a charge is made for this service. This is not in accordance with the cooperative principle of treating all patrons alike or equitably.

** Even if the cooperative made a sufficient charge to cover the costs of handling credit, this would not be the ideal situation because credit institutions can handle this service at a lower cost than the average cooperative.

** Production credit associations and other lending agencies are constantly making loans more convenient for farmers, so cooperatives should devote more efforts to getting their members to borrow from PCA's in order to pay cash to the cooperatives.

** Even if farmers realize they could save money by borrowing from lending agencies and paying cash at the cooperative, a loss in business volume might be expected if the cooperative demanded cash. But the cooperative could lose some business by operating on a cash basis and still realize the same net margins as it did with a large volume of credit business.

** If farmers do not want to pay cash or if cooperatives do not want to demand it, and if cooperatives also do not want to directly charge for credit or give cash discounts, they may consider the possibility of withholding a charge for credit from patronage funds. This may not reduce credit sales appreciably, but it could serve to equitably allocate the cost of handling credit, and it should not drive many patrons away from the cooperative.

Suggestions

Finally, the following suggestions should be helpful in improving credit operations among farm supply cooperatives:

1. Establish realistic policies by action of the board of directors.

Obtain approval of the policy by the members, minimize exceptions to it, and expect the manager to enforce rather than formulate the credit policy.

2. Adopt specific procedures for extending credit.

Select new applicants carefully, discuss the policy and terms for mutual understanding, have employees sell the credit policy along with the commodities, and establish regular board review of practices and individual accounts.

3. Establish sound collection practices and follow-through.

Send monthly statements to patrons with accounts, go after payment on the date agreed, and let account holder know that the association handles credit on businesslike basis. Protect the association by using notes on slow accounts, and use collection agencies as a last resort.

4. Recognize the costs of credit and allocate them to patrons on an equitable basis.

Charge for credit or grant cash discounts. If neither of these methods are feasible, allocate the cost of credit by distributing patronage refunds at different rates on the basis of cash and credit purchases.

5. Encourage farmers to use existing credit agencies.

Point out that credit from these agencies is cheaper than it is at the cooperative. Suggest that patrons obtain a line-of-credit which gives them a loan commitment that can be drawn upon periodically as needed.

6. Encourage the use of advance deposits from patrons and pay interest on them.

Credit Control In Selected Retail Farm Supply Cooperatives

Area III -- Wisconsin, Minnesota, North Dakota, South Dakota, and Northern Iowa

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Farmers are using an increasing amount of credit at their farm supply cooperatives. Several factors that may account for this are: (1) Farmers are using more commercial feeds, fertilizer, and pesticides due to technological advances; (2) farm size is increasing; (3) farm incomes have declined in recent years in the face of rising costs; and (4) distributors of farm supplies generally grant credit as a part of their service.

A 5-year comparison of 13 associations included in this study shows that credit is becoming more of a problem and, therefore, indicates a need for increased efforts for its control (figure 1). From 1952 to 1956, their credit sales increased 44 percent while total sales increased only 25 percent. Credit sales increased from 59 percent of total sales in 1952 to 66 percent of total sales in 1956. Accounts receivable increased even more rapidly during this period--85 percent from 1952 to 1956.

With increased needs for credit come the problems of how credit sales can be kept at a minimum, and how accounts receivable can be collected quickly with little expense or loss.

The purpose of this study is to determine (1) trends in the use of credit by local diversified farm supply cooperatives, and (2) practical policies and procedures for controlling credit.

Method of Study

This study covers 22 local farm supply cooperatives in Minnesota, Wisconsin, North Dakota, South Dakota, and northern Iowa. It is the third of a series covering general farm supply retail cooperatives operating under different conditions in various areas of the United States.

Farmer Cooperative Service interviewed representatives of these associations to obtain information on their credit extension and control. Information in this report is based on credit operating data of the associations studied for the last 5 years and on views and observations of their managers in administering credit services.

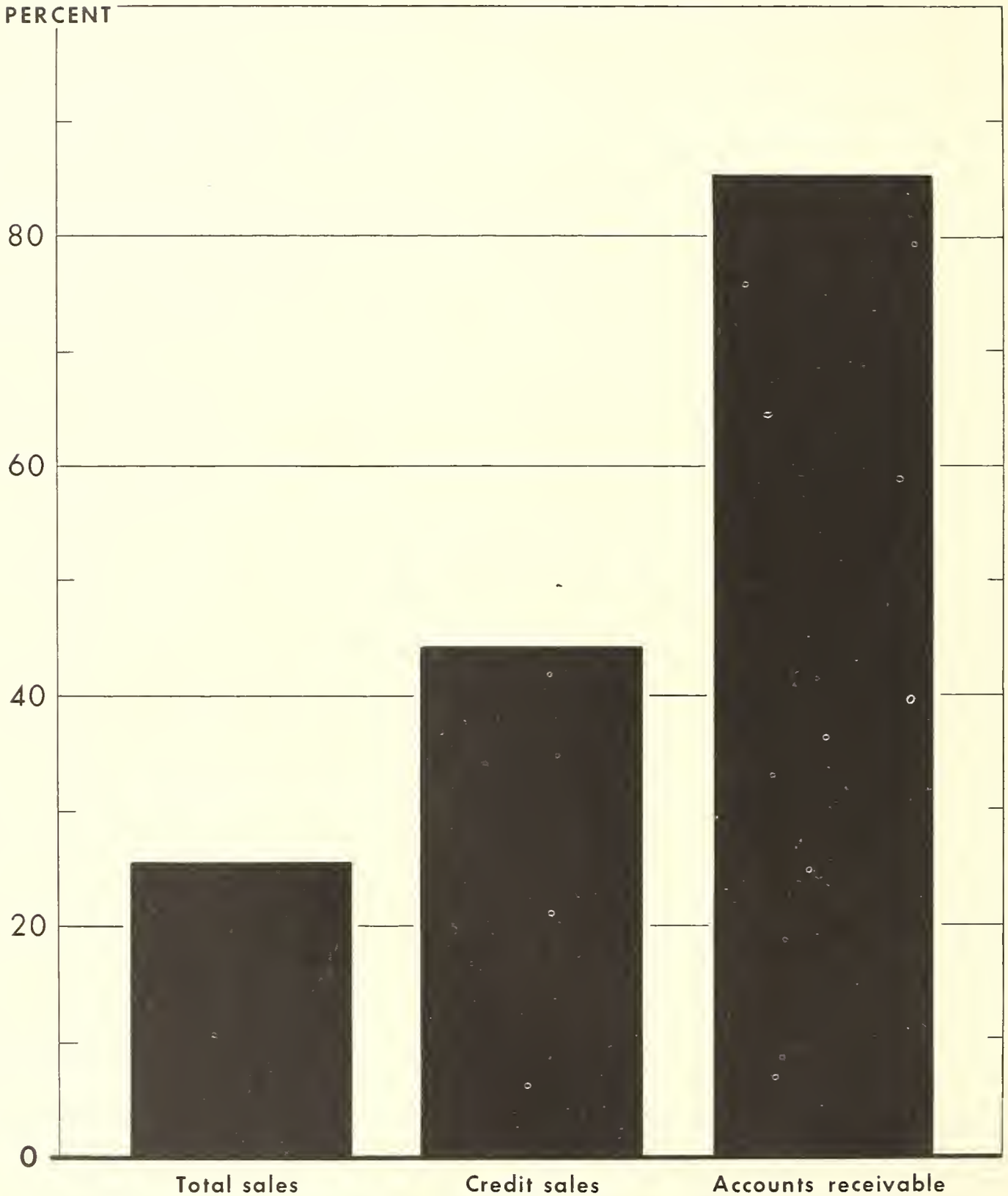
The associations were selected on the basis of the following criteria: (1) At least one-third of their business was on a credit basis, (2) they handled a diversified line of farm supplies, and (3) they were above average in controlling the credit they extended. Associations meeting these criteria were suggested by various regional cooperatives, and final

Note: Appreciation is expressed to officials of the farmer cooperatives who provided information on their credit operations; and to J. Warren Mather, Chief, and John M. Bailey of the Farm Supplies Branch, Farm Cooperative Service, for assistance in planning and developing this study.

Figure 1

PERCENT INCREASE IN TOTAL SALES, CREDIT SALES, AND ACCOUNTS RECEIVABLE, 1952-56

13 Local Farm Supply Cooperatives in 5 States



selections made by Farmer Cooperative Service.

The average sales volume for these associations for the 1956-57 fiscal year was $386,000. Petroleum products and tires, batteries, and automotive supplies amounted to 72 percent of this volume; feed, seed and fertilizer made up 19 percent; and other farm supplies amounted to 9 percent of sales.

In 11 associations, petroleum and related items amounted to more than 70 percent of sales. In the other 11 associations feed, fertilizer and other farm supplies amounted to about 60 percent and petroleum was about 40 percent of sales.

This report covers four principal phases: (1) Credit policies, (2) credit extension practices, (3) credit collection procedures, and (4) analysis of credit operating data. Trends were established by obtaining sales and credit data for the last 5 years.

On the basis of the amount of sales in accounts receivable, the selected local cooperatives were better than the average association in this area. They had an average of 19 days' sales in accounts receivable as compared with 29 days for 149 oil associations and 24 days for 41 farm supply associations in this area (figure 2).[1] The number of days of sales in accounts receivable in the selected locals increased 27 percent during the last 5 years compared with a 51 percent for the 149 oil associations and 43 percent for the 41 farm supply associations. A group of local farm supply associations in Michigan, Indiana, Ohio and Pennsylvania that were used in a similar study had 14 days' sales in accounts receivable in 1956, while a second group studied in the Pacific Northwest had 23 days' sales in such accounts.[2]

Credit Policies

A credit policy is one of the most important tools in controlling credit. Policies of these 22 upper Midwest associations varied from "credit sales will be discontinued to customers with accounts over 30 days old," to "Accounts must be paid by the end of the fiscal year."

A tabulation showing the number of associations following various credit policies follows:

Policy	Number of cooperatives
Accounts due 20th of month of purchase	1
Accounts due 10 days after month of purchase	1
Accounts due 30 days after purchase	8
Accounts due 30 days after month of purchase	1
Accounts due 90 days after purchase	1
Accounts due at year end	10

Eight associations had some type of 30-day credit policy. Four of these discontinued credit sales to customers after accounts reached 30 days. The other four expected accounts to be paid after 30 days, but took no action until 60 or 90 days.

Ten associations had rather loose policies stating merely that accounts should be paid at the end of the year. One manager tried to hold accounts to 90 days but had no set policy on this; another discontinued sales to doubtful accounts; and a third had an understanding with patrons that accounts were to be paid at harvest time.

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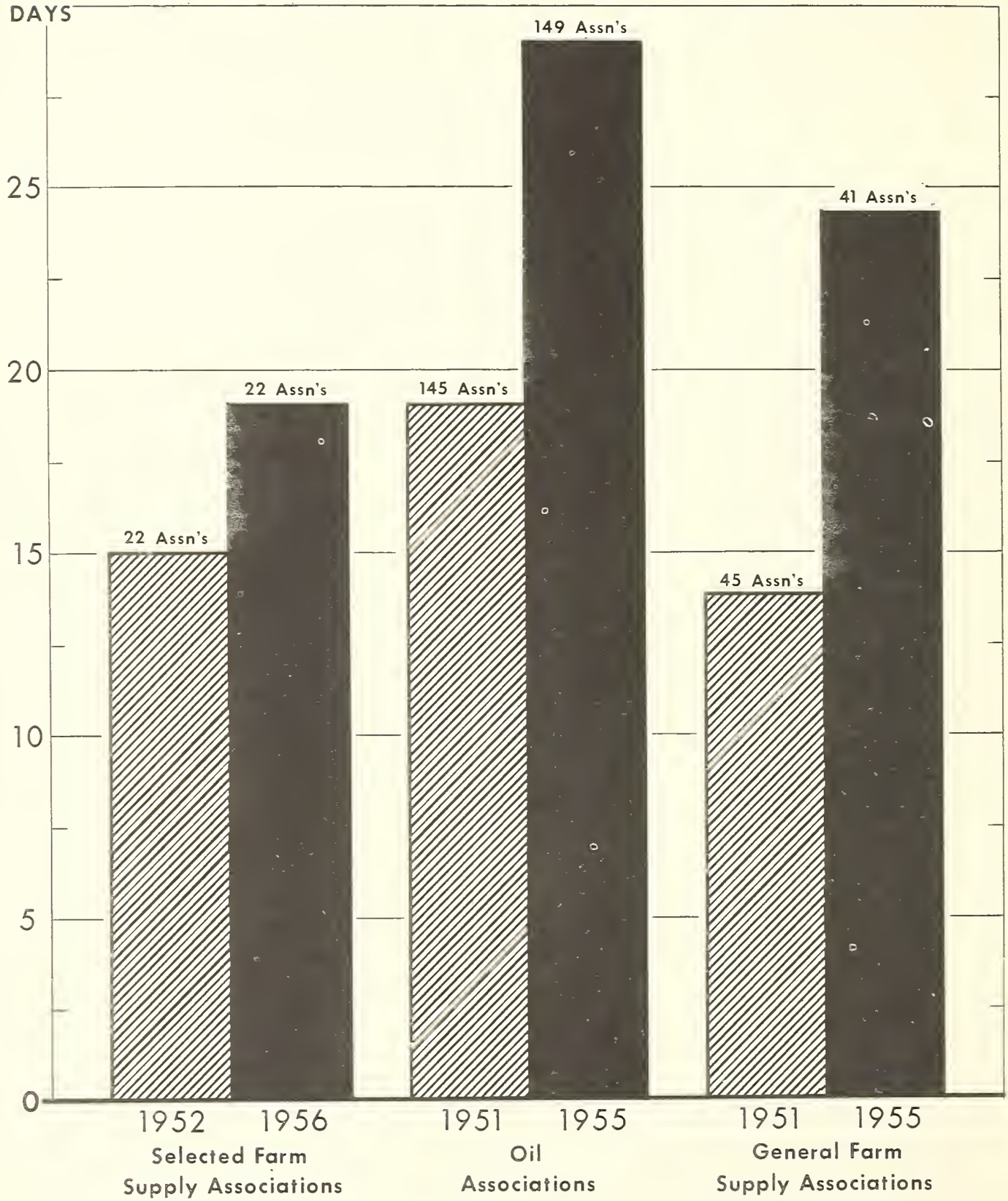
[1] Cooperative Auditing Service. Summary of Comparative Costs of Operation, Periods Ending May 1, 1955 to April 30, 1956, Cooperative Oil Associations, Farm Supply Cooperatives, Food Stores and Grain Elevators. Minneapolis, Minn. 40 pp.

[2] Bailey, John M., Credit Control in Selected Farms Supply Co-ops. Gen. Rpt. 35, Farmer Cooperative Service, U. S. Dept. of Agr. 30 pp. 1957.

Figure 2

DAYS' SALES IN ACCOUNTS RECEIVABLE IN LOCAL FARM SUPPLY CO-OPS IN UPPER MIDWEST, 1951-56

22 Selected Locals Compared With 190 Locals in 5 States



Policy Effect on Accounts Receivable

The importance of having a definite short-term credit policy is shown in table 1. Eleven associations with definite short-term policies had 14 percent of their assets in accounts receivable, compared to 20 percent for 11 associations with indefinite policies. Thus, the associations with weak credit policies had over 41 percent more of their assets in accounts receivable than associations with definite policies.

The accounts receivable in associations with definite policies also were more current than those in associations with weak policies. Table 1 shows that 48 percent of the accounts in associations with definite credit policies were under 30 days compared with only 33 percent of the accounts for the associations with loose credit policies.

Several managers indicated that because they did a large volume of petroleum business or because they were located in a cash crop area it would be very difficult to control credit even with a credit policy. Data in a later section of this report, however, indicate that the type of farming area and the type of commodities handled did not greatly affect the amount or age of accounts receivable.

Policy Announcement

A thorough understanding of the policy is necessary if the patrons are to abide by it. Of the 22 associations, 19 intended to inform the patron of their credit policies at the time credit was extended. Eleven did this by orally informing the patron, but several of these managers believed the explanation was often inadequate, or they completely omitted it at times. Seven associations gave the patron a written announcement of the credit policies in addition to orally explaining them. Three associations did not inform the patron of their credit policy at the time of extension.

Policy Changes

To minimize credit problems, three associations that formerly had no definite policy adopted specific policies during the last 5 years. Also, during this period five associations with credit policies became stricter in enforcing them. Twelve associations had made no change in their policy and one became more liberal in extending credit during the 5-year period.

To minimize credit sales in the last 5 years, 7 associations explained the cost of credit to patrons, and 4 insisted on cash from some patrons after credit reached a certain age. One of the 3 adopting a definite credit policy stated this policy reduced its credit business. The rest of the associations reported no special efforts to minimize credit sales.

When asked what effect they expected that relaxing credit policies would have, all managers believed they would gain very little volume and that most of this volume would be "put on the books."

Although none of the associations believed it would be wise to liberalize credit terms, none thought it could adopt a cash policy without a significant loss in sales volume. Expectations of loss ranged from an indefinite "We would lose some business," to "We would lose one-third to one-half of our volume." Most of the associations believed, however, that a majority of the patrons would come back. In the associations studied, credit costs amounted to nearly one-third as much as the net margins. Therefore, an association could lose a considerable volume of business by adopting a cash policy and still realize the same net margin as it had while extending credit.

TABLE 1.--Comparison of accounts receivable and credit sales in associations having definite short-term policies and those having indefinite policies, 1956

Cooperatives with definite credit policies				Cooperatives with indefinite credit policies			
Association number	Monthly average accounts receivable as percent of total assets	Proportion of accounts under 30 days	Days' credit sales in average accounts receivable	Association number	Monthly average accounts receivable as percent of total assets	Proportion of accounts under 30 days	Days' credit sales in average accounts receivable
	Percent	*Percent*	*Percent*		*Percent*	*Percent*	*Percent*
3.....	7	(1)	(1)	1.....	28	28	87
4.....	14	76	(1)	2.....	28	65	45
6.....	5	64	22	5.....	25	(1)	(1)
8.....	16	58	63	7.....	14	20	76
11.....	6	31	28	9.....	30	28	93
16.....	21	28	86	10.....	18	24	70
17.....	18	(1)	72	12.....	13	21	51
18.....	13	49	55	13.....	17	55	65
20.....	16	(1)	71	14.....	17	25	77
21.....	15	40	73	15.....	16	51	66
22.....	24	35	62	19.....	12	18	---
Average.	14	48	59	Average.	20	33	70

[1] Data not available.

Credit Extension Practices

In 18 of the associations studied, the manager initially decided whether credit was to be extended to an individual. In three cases the manager shared this decision with a credit manager, and in one case the department heads decided. Generally, once credit was approved, any employee could extend credit to the patron unless informed otherwise.

Application for Credit

None of the associations required a formal credit application. About half of them used credit bureau ratings in investigating patrons prior to extending credit. The other half relied on an investigation of the patron by the manager. The manager usually checked with local business men and bankers on the prospective patron's standing and also discussed the request with the patron.

Managers in small communities where patrons were personally known generally believed that credit bureau ratings were not necessary. In larger communities or when patrons were unknown to the management, the use of a credit bureau rating was generally preferred.

Review Practices

When asked whether their auditors had made any recommendations about credit use or control, five associations reported credit control had been mentioned by the auditors. Two auditors suggested a more definite policy, one said a better patron understanding was needed, and one said credit must be controlled but didn't suggest how this was to be done. No information on auditor's comments was reported by one association.

In all but four associations the board reviewed the accounts receivable and credit practices each month. All but two associations aged the individual accounts. In 15 associations accounts were aged monthly and the remainder aged them less frequently.

Aging of accounts is the practice of placing accounts receivable in specific age groups. The following age breakdown is a typical one. The most current accounts are grouped from 0 to 30 days. Less current accounts are placed in groups of 30 to 60 days, 60 to 90 days, 90 to 180 days, 180 days to 1 year, and over 1 year. The aging process is usually performed each month.

Only a few managers believed the board's review contributed to credit control. Most managers stated that the board tended to go along with the practices of the manager.

Advance Deposits by Patrons

Advance deposits by patrons were not used to a large extent in any of these associations. Eleven said they encouraged the use of such deposits. Only four associations paid interest on these deposits. Those that did not pay interest believed that encouraging the use of advance deposits did little good. Other opinions frequently expressed were that farmers who used advance deposits were not the credit problems in the first place, and advance deposits required as much work as handling credit.

An advance deposit should be of value in some cases. Patrons who might find this a convenient way to pay cash are those who are in a financial position to pay cash, but don't like to pay cash or write a check for each purchase; those who don't happen to be at home at the time of delivery; or those who send their children or hired man to the cooperative for supplies. In cash farming areas where an account for the past year is often paid in one payment in the fall, some patrons might make a payment for the next year with adequate inducements.

Commodity Effect on Credit

Ten managers thought that petroleum caused more credit problems than any other commodity. Reasons for feeling this way were: (1) Petroleum typically has been handled on a credit basis by all other distributors; (2) petroleum is consumed so it can't be repossessed; and (3) large bills accumulate without the patron always realizing it.

Five associations were of the opinion that seed and fertilizer caused more credit problems than other commodities because purchases were large and came at a time of year when income was relatively low. Five associations indicated that credit problems were about the same with all commodities.

Selling Approach

The psychology of asking for cash when a sale is made is more likely to induce a cash payment than asking if the patron wants to "charge it." In 17 associations employees were supposed to ask for cash when making a sale. In practice, however, they often did not do this because they knew the patrons were going to "charge it." Five associations let the customer choose the method of payment without suggesting cash or credit.

Members' Awareness of Credit Problems

Fourteen associations reported that credit had been discussed at annual meetings in the last 5 years. Of these only two said that it was merely mentioned and not really discussed. Several said credit was the main topic at every annual meeting, although usually no change in policies or practices resulted.

While information was not obtained as to whether the subject of credit was initiated by the members or by the board of directors or manager at annual meetings, the fact that it was discussed indicates members were aware of and concerned about credit problems in their cooperatives.

Credit Collection Practices

The supply associations in this study used a variety of means to collect accounts receivable.

Written Notices

All the associations regularly sent some form of notice to account holders. Most associations believed these notices served a useful purpose.

Twenty-one associations sent monthly statements. Three reported they received about a 50 percent response on the first statement. Other managers' comments ranged from "It's merely a reminder that they have an account," to "Notices are a very effective means of collecting accounts," and "Patrons usually make some form of arrangement to settle the account when they receive a notice."

Five associations used form letters in addition to the monthly statements. Seven used personal letters only after accounts became rather old or at the end of the year. Response to personal letters was reported good.

Personal Visits

All the managers except one made personal visits to collect accounts. Twelve made such visits throughout the year. They reported spending from 2 hours to 40 hours a month on this work. The rest used this method only at the end of the fiscal year, and they indicated they spent from 2 hours to 15 days in making such calls.

Most managers believed that personal visits were effective. Three stated that from 50 to 75 percent of the accounts were collected on these visits. Others merely said they were very effective or that the patron usually agreed to work out some type of arrangement. One voiced the opinion that he could do as well if he talked to the patron at the cooperative.

Use of Notes

Eight associations used notes to secure accounts. Notes were taken only on doubtful accounts and as a last resort to help assure that accounts could be collected. One used notes only if the patron expected a definite income at a certain time. One used notes to get interest. Still another said notes enabled the patron to pay his gasoline bill and get the tax refund.

Most notes carried interest rates of from 6 to 7 percent annually. The time or due date varied from 3 months to the end of the year. Four held all their notes and 4 had them discounted. Because notes were used for only a small percent of the accounts and because half were discounted, the interest received on notes did not help much in paying for credit.

All associations except one that used notes reported that they were well accepted. In a few associations the patrons were very willing to sign notes because this practice permitted them to use more credit.

Other Methods of Collecting Accounts

Thirteen associations used collection agencies to some extent in the last fiscal year. The amount of accounts turned over to such agencies ranged from $75 to $1,500. The amount collected ranged from 0 to 100 percent. Most managers were not completely satisfied with the results. Thirteen associations reported using an attorney to collect accounts but only one expressed satisfaction with this service.

Only four associations in this study marketed farm products for members. All of these associations withheld sales proceeds to apply on accounts, but only one reported this practice a help. One applied sales proceeds on accounts only if the patrons requested they be used in this way. Two reported that retaining proceeds of products marketed helped very little.

Patronage refunds and dividends on stock were withheld and applied on accounts in a few instances. Those managers who did this said it aided in closing out small accounts. They believed the application of patronage refunds on accounts did not work very well because the amount was too small to be of much value in closing the accounts.

Responsibility for Collecting Accounts

Generally the manager was solely responsible for collecting accounts, and in most of the associations studied he was held financially responsible for accounts. Only three of the associations held employees other than the manager financially responsible. In eight associations managers held employees who extended credit responsible for collecting it. Most of these employees were petroleum deliverymen employed on a commission basis.

The effectiveness of having the manager or other employees financially responsible is shown in table 2. In 11 associations in which the manager or other employees were financially responsible, average accounts receivable for the year were 257 percent of year-end accounts receivable compared with 156 percent in 11 associations which did not have this requirement. Accounts receivable at the year-end amounted to only 9 percent of total assets in associations which charged accounts to employees, whereas they amounted to

TABLE 2.--Comparison of associations charging off accounts against managers with those not charging off such accounts, 22 associations, 1956

Associations charging accounts against manager's commissions				Associations not withholding accounts from managers' commissions			
Association number	Average accounts receivable as a percent of assets	Average accounts receivable as a percent of year-end accounts receivable	Year-end accounts receivable as a percent of assets	Association number	Average accounts receivable as a percent of assets	Average accounts receivable as a percent of year-end accounts receivable	Year-end accounts receivable as a percent of assets
	Percent	*Percent*	*Percent*		*Percent*	*Percent*	*Percent*
3.....	7	490	2	1.....	28	173	16
4.....	14	640	2	2.....	28	267	10
5.....	24	155	16	7.....	14	224	6
6.....	5	177	3	8.....	16	128	12
9.....	30	222	13	16.....	21	126	17
10.....	18	153	12	17.....	18	114	16
11.....	6	97	6	18.....	13	174	8
12.....	13	421	3	19.....	12	111	11
13.....	17	100	17	20.....	16	106	15
14.....	17	117	14	21.....	15	139	11
15.....	16	259	6	22.....	24	156	15
Average	15	257	9	Average..	19	156	13

13 percent of the assets in associations which did not follow this practice. And monthly average accounts receivable amounted to 15 percent of the assets in associations that held the employees responsible, compared with 19 percent for those that did not use this practice. This indicates that employees who are financially responsible for accounts are not likely to extend credit to risky patrons. Also, they are likely to make a strong effort to collect these accounts once they have been extended.

Analysis of Credit Data

The volume of credit business performed by the associations studied has increased during the last 5 years. This increase has added to the problem of controlling accounts receivable. Age of accounts, in these associations, however, remained fairly constant during this period. As more credit is extended, more capital, labor, and materials are involved in handling accounts receivable.

Amount of Credit Granted

In 13 associations with complete information for 1952 and 1956, total supply sales increased 26 percent and credit sales increased 44 percent during this period (table 3). Credit sales constituted 66 percent of total sales in 1956 compared with 59 percent of sales in 1952 (table 4).

The increased use of credit resulted in larger accounts receivable. They increased 85 percent from 1952 to 1956, or more than three times as fast as supply sales.

The increase in accounts receivable is also illustrated by the measure of "days total sales in accounts receivable." This measure is obtained by dividing total sales by

TABLE 3.--Changes in sales, credit sales, and accounts receivable in 13 local farm supply associations from 1952-56

Association number	Increase in sales	Increase in credit sales	Increase in accounts receivable	Change in accounts receivable over 30 days
	Percent	*Percent*	*Percent*	*Percent*
1	10	4	43	13
2	30	33	7	102
6	34	44	-23	-71
7	10	39	27	-3
10	36	75	158	-26
11	20	52	262	73
12	59	79	285	26
14	15	46	45	18
15	83	120	161	-58
16	13	43	21	-8
17	([1])	-2	-5	([2])
18	3	13	78	-6
20	19	26	52	([2])
Average	26	44	85	6

[1] Data not available.
[2] Less than .5 percent.

TABLE 4.--Changes in credit use for 22 farm supply cooperatives in 5 States, 1952-1956

Association code number	Proportion of sales made on credit		Days' sales in year-end accounts receivable		Proportion of accounts over 30 days		Proportion of assets in accounts receivable	
	1952	1956	1952	1956	1952	1956	1952	1956
	Percent		*Days*		*Percent*		*Percent*	
1	61	58	19	24	64	73	12	16
2	70	72	12	10	17	35	15	10
3	(1)	86	0	5	(1)	(1)	1	0
4	(1)	84	9	6	42	24	3	2
5	(1)	61	18	20	(1)	(1)	16	16
6	75	81	14	8	58	36	5	3
7	40	48	12	14	82	80	7	6
8	(1)	51	16	21	54	42	12	12
9	(1)	74	21	26	64	72	11	13
10	78	87	20	32	65	76	9	12
11	57	70	6	17	40	69	2	6
12	77	86	4	9	63	79	1	3
13	(1)	75	32	41	54	45	17	17
14	59	75	33	42	63	75	13	15
15	48	57	9	12	77	49	3	6
16	37	47	21	23	78	72	13	14
17	39	38	20	19	(1)	(1)	17	15
18	75	83	10	17	54	51	5	6
19	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
20	53	56	21	28	65	(1)	11	13
21	(1)	39	13	17	62	60	10	11
22	(1)	55	13	18	(1)	65	12	15
Average	59	[2] 66	15	19	59	59	9	10
Median	59	[2] 70	14	18	63	65	11	12

[1] Data not available.
[2] Data for 13 associations.

the number of selling days in a year--300 were used in this study--and then dividing accounts receivable by this amount. This measure shows the number of days of total sales uncollected or "on the books" at any time. The average days' sales in accounts receivable increased from 15 days in 1952 to 19 days in 1956 (table 4). Put another way, accounts receivable amounted to 5 percent of sales in 1952 compared with 6 percent in 1956.

Days' credit sales in accounts receivable is another ratio and differs from days' sales in accounts receivable in that it measures the length of time accounts remain uncollected. It usually is based on 360 days a year rather than the number of selling days. In these associations accounts receivable remained outstanding an average of 41 days in 1956, or they were equal to 9.5 percent of credit sales that year. Table 5 shows accounts receivable as a percent of total sales, days' sales in accounts receivable, and the number of days' credit sales in accounts receivable in 1956.

In these associations the liquidity of the accounts remained fairly constant during the last 5 years. At the close of both 1952 and 1956, 59 percent of the accounts were over 30 days old (table 4).

TABLE 5.--Year-end and average accounts receivable in relation to total retail sales and credit retail sales, 1956

Association number	Days' total sales in year-end accounts receivable	Year-end accounts receivable as a percent of total sales	Days' credit sales in average accounts receivable	Days' credit sales in year-end accounts receivable
	Days	*Percent*	*Days*	*Days*
1.....	24	3.0	87	50
2.....	10	3.3	45	17
3.....	5	1.7	(1)	(1)
4.....	6	2.0	19	2
5.....	20	6.7	82	39
6.....	8	2.7	22	12
7.....	14	4.7	76	34
8.....	21	7.0	63	50
9.....	26	8.7	93	42
10.....	32	10.7	70	45
11.....	17	5.7	28	29
12.....	9	3.0	51	13
13.....	41	13.7	65	65
14.....	42	14.0	77	65
15.....	12	4.0	66	26
16.....	23	7.7	86	68
17.....	19	6.3	72	63
18.....	17	5.7	55	32
19.....	(1)	(1)	(1)	(1)
20.....	28	9.3	71	67
21.....	17	5.7	73	52
22.....	18	6.0	62	40
Average...	19	6.3	60	41
Median....	18	6.3	68	41

[1] Data not available.

All 22 associations showed some increase in supply sales from 1952 to 1956 (table 6). This increase ranged from less than 1 percent to 83 percent, and averaged about 30 percent. As mentioned the 13 associations with more complete data experienced an average increase of 26 percent.

Changes in sales were not always directly associated with comparable changes in accounts receivable. One association had a 78 percent increase in sales and a 9 percent drop in accounts receivable, while another association had a 25 percent increase in sales and a 266 percent increase in accounts receivable. Both associations increased sales, but one reduced accounts receivable and the other more than doubled them. (See associations 4 and 11 in table 6).

Year-End Versus Monthly Average Accounts Receivable

Measures of accounts receivable usually are based on the year-end accounts, because these figures are readily available. Many businesses make a concentrated effort to reduce accounts at the year end to show a

TABLE 6.--Comparative credit data for 22 farm supply cooperatives in 5 States, 1952 and 1956

Association code number	Change in total farm supply sales from 1952 to 1956	Change in accounts receivable from 1952 to 1956	Monthly average accounts receivable in 1956 as percent of accounts at end of 1956	Monthly average accounts receivable as percent of total assets at end of 1956
	Percent	*Percent*	*Percent*	*Percent*
1.....	10	43	173	28
2.....	29	6	267	28
3.....	28	31	490	7
4.....	78	-9	640	14
5.....	12	25	155	24
6.....	34	-23	177	5
7.....	10	27	224	14
8.....	39	71	128	16
9.....	51	90	222	29
10.....	57	158	153	18
11.....	25	266	97	6
12.....	59	285	421	13
13.....	34	62	100	17
14.....	15	45	117	17
15.....	83	160	259	16
16.....	13	21	126	21
17.....	([1])	-5	114	18
18.....	3	78	174	13
19.....	31	69	111	12
20.....	19	52	106	16
21.....	9	47	139	15
22.....	13	61	156	24
Average.....	31	71	207	17
Median.....	26	49	156	16

[1] Less than .5 percent.

strong financial position. This practice is often termed "window dressing."

Average accounts receivable of the associations studied were 207 percent of accounts at the year end in 1956 (table 6). Average accounts ranged from 97 percent to 640 percent of the year-end amounts. Only two associations maintained average accounts at the same level as year-end accounts.

Average accounts receivable amounted to 17 percent of assets contrasted with 10 percent for year-end accounts. Days' credit sales in average accounts receivable amounted to 60 days while they amounted to only 41 days when based on year-end accounts (table 5).

In nearly all associations, their fiscal year-end accounts receivable were significantly lower than the average for all associations that month and lower than their accounts for the month preceding the fiscal year-end (table 7). This situation indicates that a special effort was made to reduce accounts before the close of the year. Examples were as follows:

(a) Association 8 which closed its fiscal year on April 30 had accounts on that date at 78 percent of its monthly average. This percentage was 19 percentage points below the average for all associations in April. Also, it was 25 points below its accounts on March 31, but the same as the average for all associations in March.

(b) Association 15, whose fiscal year ended on January 31, had accounts on that date at 39 percent of its monthly average. This rate was 32 points less or about one-half as much as the average for all associations in January. Also, it was 42 percentage points under its accounts in December, but only 25 points less than the average of all associations for December.

Monthly Trends in Accounts and Credit Sales

Supply requirements of agriculture have a seasonal demand. Monthly variations in credit sales and accounts receivable reflect the seasonal pattern of total farm supply sales.

Accounts receivable were lowest at the beginning and at the end of the calendar year. As previously mentioned, accounts receivable were generally at their lowest point in the fiscal year-end month. Since 12 associations ended their fiscal year in December, it is not surprising that accounts receivable were at their lowest point in December.

Accounts receivable in all associations remained quite low the first 3 months of the year at 71, 77, and 78 percent of average, respectively (table 7). In April and May accounts increased quite rapidly as spring sales increased. The accounts continued to increase gradually until September. Most of the accounts were paid off during the late fall months and reached a low point of 64 percent of average in December.

Credit sales also varied greatly during the year. They were lowest in December, January, and February--equivalent to 75 percent, 76 percent and 70 percent, respectively, of the monthly average credit sales for 1956 (table 8). In May, credit sales were 145 percent of average--twice as large as those in the winter months.

If accounts receivable are kept current, their amount should vary closely with credit sales. Figure 3 shows that both increased sharply during the spring months. Credit sales then fell off consideraly during July and August, but accounts receivable continued to increase slightly. This situation indicated that many credit sales made in the spring were not paid until late fall when a concentrated effort was made to reduce accounts receivable. Both credit sales and accounts began to drop off sharply in October and continued this

TABLE 7.--Monthly variation in accounts receivable shown as percentage of 12 months' average in 22 local farm supply associations, 1955-56[1]

(12 months' average for each association = 100 percent)

Association code number	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Range	
													Low	High
	Percent												*Percent*	
1	64	66	73	89	111	118	114	115	126	142	125	58	58	142
2	49	71	83	108	113	118	121	126	122	132	119	38	38	132
3	38	43	25	62	147	140	145	169	192	128	91	20	20	192
4	50	57	74	83	97	113	142	173	196	162	16	37	16	196
5	106	102	64	97	99	101	99	104	104	119	112	93	64	119
6	83	98	73	47	87	65	101	117	171	161	141	57	47	171
7	56	63	75	91	118	114	118	120	133	137	131	45	45	137
8	98	103	103	78	93	105	94	97	108	105	118	99	78	118
9	61	69	71	94	117	138	158	160	118	86	83	45	45	160
10	67	65	43	61	96	120	134	142	150	140	115	67	43	150
11	75	69	64	109	110	103	135	163	125	99	84	64	64	163
12	45	48	62	86	127	151	156	177	147	104	73	25	25	177
13	81	81	97	100	97	98	110	120	124	110	105	78	78	124
14	87	84	80	96	110	112	109	111	114	124	86	87	80	124
15	39	53	62	84	110	136	126	122	127	141	120	81	39	141
16	87	90	93	116	111	107	102	103	106	107	99	79	79	116
17	90	95	101	131	114	104	99	93	97	96	91	88	88	131
18	72	77	85	108	113	119	112	114	120	112	111	58	58	120
19	79	91	107	154	158	127	90	78	73	87	82	75	73	158
20	84	91	97	112	110	108	101	105	109	110	94	78	78	112
21	73	82	91	109	120	122	111	110	103	107	100	72	72	122
22	86	91	91	120	133	114	98	103	97	103	99	64	64	133
Average	71	77	78	97	113	115	117	124	126	119	100	64	64	126

[1] Months underlined indicate fiscal year-end for each association.

TABLE 8.--Monthly variation in credit sales shown as percentage of 12 months' average in 22 farm supply associations, 1956-57[1]

(12 months' average for each association = 100 percent)

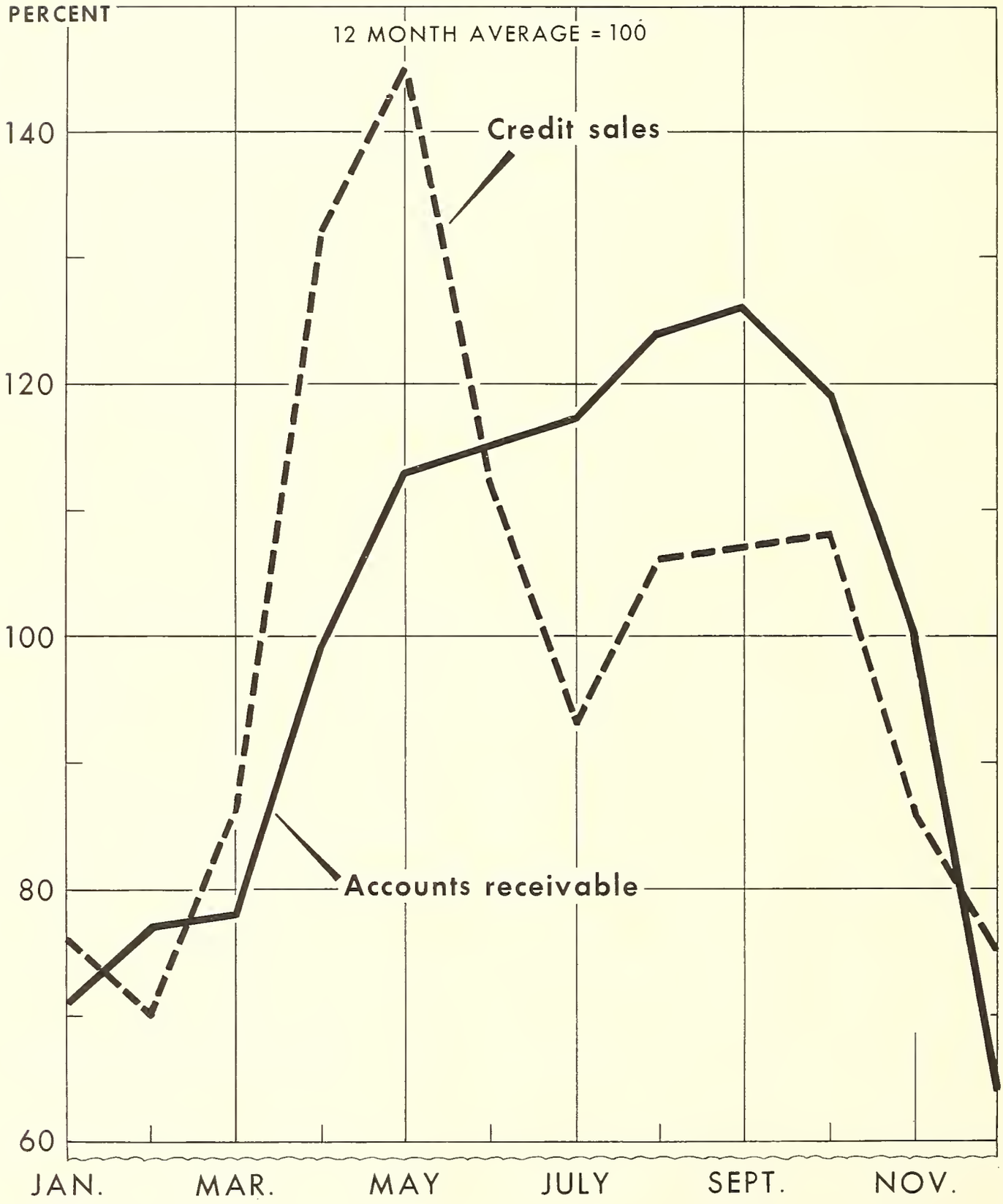
Association code number	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Range	
													Low	High
	Percent												*Percent*	
1	77	64	79	119	143	123	84	76	112	140	106	77	64	143
2	90	88	93	120	120	115	89	87	97	120	93	87	87	120
3	61	54	47	90	195	132	90	145	136	103	82	65	47	195
4	48	51	72	64	130	112	94	187	162	157	57	65	48	187
5	120	94	102	96	93	91	85	97	104	117	104	98	85	120
6	77	75	74	100	144	133	74	78	116	156	87	85	74	156
7	60	61	87	123	172	125	113	82	110	106	83	78	60	172
8	85	88	93	118	143	126	90	72	92	94	114	85	72	143
9	45	46	56	142	150	132	137	156	119	95	58	66	45	156
10	60	52	63	107	136	114	117	161	148	115	72	56	52	161
11	67	53	113	136	140	104	103	148	130	88	59	57	53	148
12	42	38	56	132	154	137	117	174	140	113	55	43	38	174
13	77	65	105	144	102	105	109	134	118	97	87	58	58	144
14	89	84	91	120	126	109	118	86	81	99	84	112	81	126
15	88	71	74	109	141	133	79	100	107	131	107	58	58	141
16	62	75	82	186	135	113	92	78	90	98	97	91	62	186
17	91	80	116	197	166	72	62	77	73	94	88	85	62	197
18	101	75	85	130	127	114	96	90	116	95	99	74	74	130
19	84	80	118	251	214	75	66	62	50	66	67	66	50	251
20	79	88	88	121	150	87	75	78	84	91	109	80	75	150
21	73	84	117	152	138	118	87	78	82	90	89	93	73	152
22	90	83	83	156	169	93	74	91	76	119	98	69	69	169
Average	76	70	86	132	145	112	93	106	107	108	86	75	70	145

[1] Months underlined indicate fiscal year-end for each association.

Figure 3

MONTHLY VARIATION IN ACCOUNTS RECEIVABLE AND CREDIT SALES

22 Local Farm Supply Cooperatives in 5 States



rapid decline until they reached low points at the end of the year, or in the first 2 months of the following year.

Age of Accounts

The age of accounts receivable changed very little during the last 5 years. For 13 associations giving information for both years, 35 percent of their accounts were under 30 days in 1956 compared with 37 percent in 1952. Accounts 30 days to 180 days old amounted to 45 percent of accounts in 1956 versus 44 percent in 1952. Accounts 6 months to a year old were 12 percent of total accounts both years; and accounts over a year old were 8 percent of total accounts in 1956 compared with 7 percent in 1952.

Credit Costs

Estimates of the cost of credit were obtained from 16 associations. Such costs were classified as interest, bookkeeping, extension, collection, and bad debts.

In the associations providing data, total credit costs amounted to 2.45 percent of their credit retail sales and to 1.54 percent of their total retail sales. Also, they were equal to 13.4 percent of monthly average accounts receivable of the cooperatives. These costs are slightly higher than costs of credit among oil and general farm supply cooperatives in Minnesota.[3] Koller found that credit cost $2.08 per $100 credit sales in oil cooperatives and $1.87 per $100 credit sales in farm supply cooperatives in 1953.

The principal elements making up credit costs reported in this study were as follows:

Item	Percent of credit sales	Percent of average accounts receivable
Interest.....	1.10	6.0
Extension.....	.22	1.2
Bookkeeping.	.66	3.6
Collection....	.40	2.2
Bad debts.....	.07	0.4
Total.....	2.45	13.4

Interest was slightly less than half (45 percent) of the credit cost in the 16 associations providing cost data (table 9 and figure 4). It averaged 6 percent on monthly average accounts receivable. Apparently some of the associations borrowing from banks for cooperatives included the capital assessment to the interest rate in reporting their credit costs.

Bookkeeping cost amounted to 27 percent of the credit cost. This item included the estimated time of the manager and other employees for the additional accounting required to handle credit. It also included the cost of additional accounting materials.

Extension costs amounted to 9 percent of credit cost. They included charges for the estimated time necessary to establish a policy, to explain the policy to patrons, to investigate the patron's credit rating, and the cost of opening a credit account.

Collection costs amounted to 16 percent of total credit costs. They included the time spent by the manager and other employees in collecting accounts, postage and stationery needed for collection, travel expenses involved in collecting accounts, and fees paid to professional collectors.

Bad debt loss is often considered one of the major costs of handling credit; but in these associations it amounted to only 3 percent of the total credit cost.

In the associations studied, total credit costs amounted to 10 percent

[3] Koller, E. Fred, Accounts Receivable Credit in Minnesota Farm Supply Cooperatives, Sta. Bul. 430, Agr. Expr. Sta., Univ. of Minn., St. Paul, Minn.

Figure 4

CREDIT COSTS IN 16 FARM SUPPLY COOPERATIVES, 1956

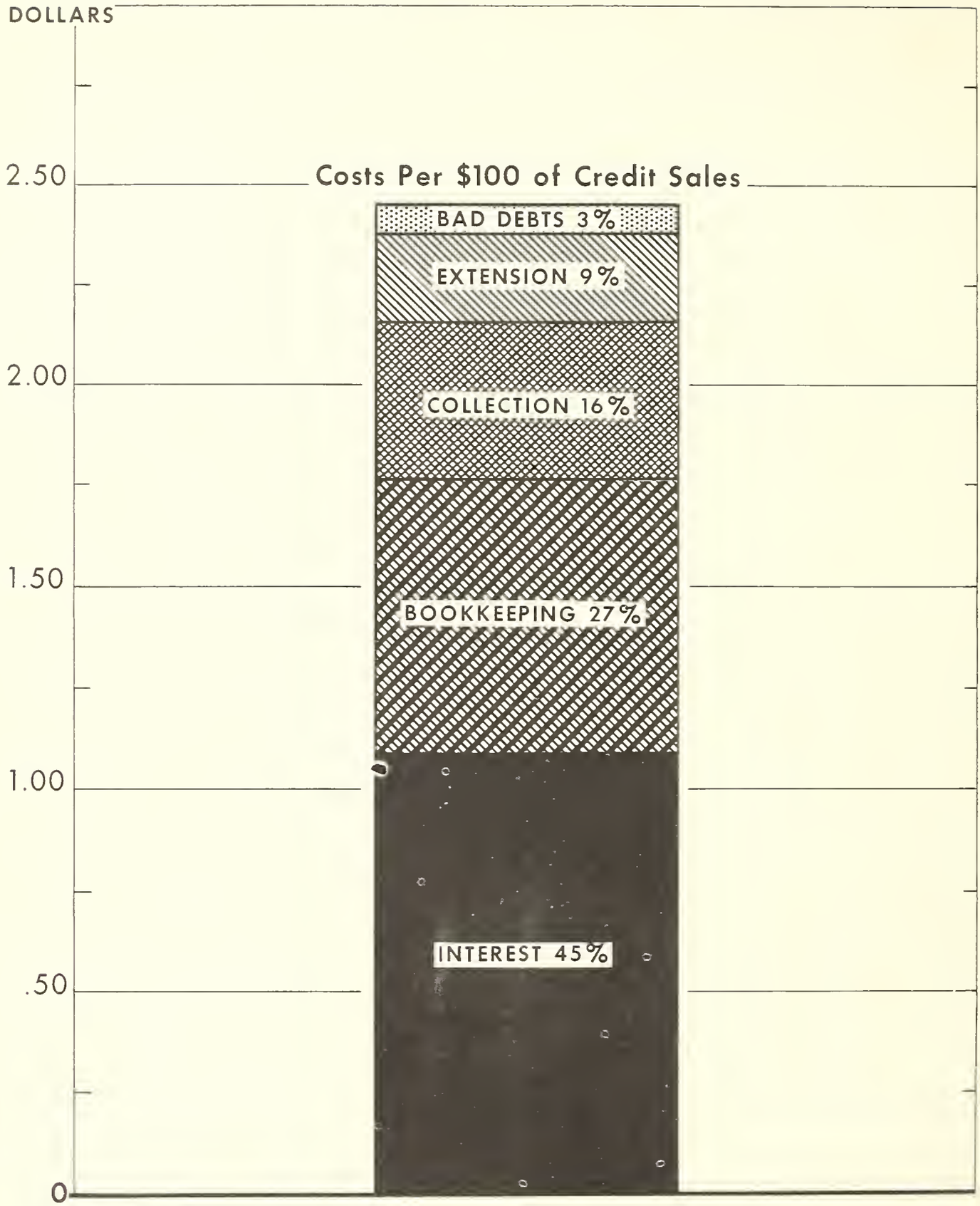


TABLE 9.--Costs of doing a credit business in 16 local farm supply associations, 1956

Association code number	Accounts receivable (monthly average)	Costs						Cost per $100 of credit sales
		Total cost	Extention	Interest	Bookkeeping	Collection	Bad debts	
			Percent	*Percent*	*Percent*	*Percent*	*Percent*	
1.....	$65,098	$6,016	3	54	6	36	1	$2.23
2.....	36,346	9,832	10	18	60	11	1	3.31
3.....	12,097	2,205	14	25	44	17	0	1.76
4.....	42,593	5,355	11	48	28	9	4	.94
5.....	50,036	4,198	6	60	21	9	4	1.42
7.....	39,073	5,380	9	25	27	32	7	3.11
9.....	82,871	5,843	3	71	17	3	6	2.02
10.....	25,684	2,958	7	61	20	12	0	2.22
11.....	21,554	6,728	11	19	16	39	15	0.45
12.....	27,665	2,246	1	86	5	7	1	1.16
13.....	17,282	1,609	([1])	54	27	19	0	1.68
15.....	16,258	5,574	14	21	45	13	7	6.30
17.....	19,334	3,695	5	31	51	13	0	3.83
18.....	69,073	13,353	29	26	32	12	2	2.98
19.....	11,608	1,235	4	50	31	15	0	2.26
21.....	73,235	5,644	2	78	8	3	9	1.55
Average	38,113	5,117	9	45	27	16	3	2.45

[1] None reported.

of their total operating expenses and to 28 percent of their total net margins (table 10).

Credit costs equal to 13.4 percent of average accounts receivable in these farm supply cooperatives seem high, but they were not as great as the rates charged by a leading mail order company for a wide variety of merchandise sold for farm and home use. Its carrying charges ranged from about 8 to 11 percent of the value of the credit sale, and averaged about 10 percent. On the declining or monthly average balance, however, these rates were about twice as high, or approximately 20 percent. The patron designated at time of purchase whether he was paying cash or buying on credit, but if the account was paid within 30 days, all carrying charges were refunded.

Charging for Credit

Of the 22 associations, only 3 gave cash discounts and 2 charged for credit. One gave cash discounts only on fertilizer, and petroleum bought in the service station. Another gave a 1 percent discount on cash purchases or purchases paid within 30 days, and the other did not give details on its cash discount.

Of the 2 associations charging for credit, 1 stated that it charged interest on accounts over 60 days old but when the account was paid usually the interest charge was forgotten. The other association charging interest charged one-half of 1 percent a month after 90 days.

Neither the cash discounts nor the credit charges were considered suf-

TABLE 10.--Credit costs as a percent of operating expenses, credit sales, total sales, and net margins, in 16 local farm supply cooperatives, 1956

Association number	Credit cost as a proportion of:				Percent of sales on credit
	Operating expenses	Credit sales	Total sales	Net margin	
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
1.....	8	2.2	1.3	26	58
2.....	15	3.4	2.4	42	22
3.....	8	1.8	1.6	27	86
4.....	5	0.9	0.8	12	84
5.....	6	1.4	0.9	15	61
7.....	8	3.1	1.5	30	48
9.....	12	2.0	1.5	18	74
10.....	12	2.2	1.9	25	87
11.....	12	2.4	1.7	23	71
12.....	7	1.2	1.0	13	80
13.....	7	1.7	1.3	31	75
15.....	14	6.3	3.6	49	57
17.....	12	3.8	1.5	65	38
18.....	17	3.0	2.5	46	83
19.....	5	2.3	0.6	13	28
21.....	5	1.6	0.6	14	39
Average.....	10	2.45	1.54	28	66
Range.....	5-17	0.9-6.3	0.6-3.6	12-65	28-87

ficient in any association to pay for its costs of handling credit.

Reasons most of the associations did not charge for credit in any manner were: "It would antagonize the patron." "Others don't charge for credit." "Credit is a service all patrons with good credit ratings are free to use." "We don't have the nerve to charge for credit." "We can't set up a workable system." "We don't think it would work." "We don't feel it's necessary." "Credit has always been handled in this manner." "We are lucky to get the accounts much less any interest." "It is too much work."

Reasons most of the cooperatives studied did not give a discount for cash were: "It was hard to decide what was cash." "With short-term credit a cash discount is of little value." "Cash discounts never had been given." "They would cause ill feelings." "We are unable to set up a workable policy." "We believe a cash discount is not needed." "People who would pay cash to get the discount always pay cash anyhow so it would not help." "It would cause others to cut prices." "Some patrons interpret a cash discount as an advance of part of their patronage refunds."

Use of Patronage Refunds in Charging for Credit.--Paying patronage refunds according to cash and credit purchases could serve as a means of charging for credit. Patronage refunds generally are computed on the basis of the total amount of purchases, regardless of whether they are for cash or credit. This means that patronage refunds to credit patrons were too large because they did not reflect credit costs in proportion to credit and cash sales. As mentioned credit costs of the associations studied amounted to nearly one-third of their net margins.

The following illustration shows the present method of distributing patronage refunds and a proposed method which would allocate the cost of handling credit to those patrons using credit. Association A had two-thirds credit sales and one-third cash sales. Its present refunds of 3 percent were paid to both cash and credit patrons, so the credit patrons received approximately $2,000 and cash patrons $1,000. Credit costs amounted to 2.5 percent of credit sales or $1,650. Credit patrons stood two-thirds of this or $1,089 and cash patrons stood $561. However, cash patrons should not be required to pay for any of the credit cost. The proposed method avoids this payment by allocating all credit costs to credit patrons and applying their patronage refunds against such costs. Association B illustrates the same idea when sales are 50 percent cash and 50 percent credit.

	Association A		Association B	
Item	Credit sales $66,000	Cash sales $34,000	Credit sales $50,000	Cash sales $50,000
Present credit costs @2.5 percent of credit sales, apportioned to:	$1,089	$561	$625	$625
Proposed adjustment in credit costs	1,650	0	1,250	0
Present patronage refunds of $3,000 @ 3 percent on all sales, apportioned to:	2,000	1,000	1,500	1,500
Difference in credit costs applied to refunds	-561	+561	-625	+625
Proposed adjustment in patronage refunds	1,439	1,561	875	2,125

This method of charging for credit might aid in reducing credit sales and accounts receivable because the patron would be paying for the use of credit. In any event it would shift the cost of carrying credit to the patron who uses it.

This method of charging should not drive the patron away because he would not pay more for an item at the time of purchase if he charged it than if he paid cash. However, it would serve as a charge for a credit service, and it would result in equitable treatment of cash and credit patrons.

The use of patronage refunds as a means of charging for credit may pose some problems in equitably financing a cooperative. If patronage refunds are retained in a revolving fund, the credit patron would not finance the cooperative in the same proportion as the cash patron; however, with no charge for credit, he is not providing his share of the financing.

Also, in the previous illustration it may be assumed that all credit purchases involved equal credit costs because these costs were calculated as a percentage of credit sales regardless of how long the accounts receivable were outstanding. To be really equitable, the credit costs should be adjusted to the length of time that accounts are outstanding.

This adjustment could be accomplished by allocating credit costs on the basis of average accounts receivable. In any event the administration of this plan may require further study.

Patrons Using Credit

The use of credit from distributors of farm supplies is a generally accepted practice. In 16 associations 75 percent or more of the patrons obtained credit from the cooperatives at some time during the year. At the end of the 1956 fiscal year, 28 percent of the patrons had accounts outstanding.

Twenty-six percent of the total amount in accounts receivable was held by the 10 largest account holders. These 10 accounts amounted to only 4.5 percent of the total number of accounts and they accounted for only 4.8 percent of the total purchases (table 11).

Not only did these 10 largest account holders represent a small proportion of the account holders and total sales, but their accounts receivable were also less current than the average accounts. On the basis of medians rather than averages, only 20 percent of the 10 largest accounts were under 30 days, while 33 percent of all accounts were under 30 days.

This situation indicates that much of the credit problem is concentrated in a few large accounts. Should the rest of the patrons carry the burden of these few large accounts?

Effect of Farming Area and Commodities Handled on Accounts Receivable

Associations with indefinite policies were concentrated to a large extent in cash crop areas and dealt primarily in petroleum products. Both of these conditions might add to the accounts receivable and increase their age. The nine associations located in cash farming areas, however, actually had less of their assets in accounts receivable than the associations in diversified farming areas (table 12).

Accounts of associations located in the cash crop area were about the same age as accounts of associations in diversified areas. In the cash crop area 39 percent of the accounts were under 30 days, while in the diversified area 40 percent were under 30 days (table 12).

The associations in which petroleum amounted to more than 70 percent of sales volume had slightly more of their assets in accounts receivable than associations handling more diversified supplies. Accounts receivable amounted to 18 percent of assets in these associations compared with 16 percent in the more diversified associations (table 13). However, the accounts of associations dealing primarily in petroleum were about equally current. About 40 percent of the accounts were under 30 days, in both groups.

These findings indicate that the type of farming area and the type of merchandise handled did not greatly affect the size or the age of accounts receivable. Differences in size and age of accounts among the associations appeared due to the extent to which these associations had definite policies.

TABLE 11.--Patrons use of credit in 22 local farm supply cooperatives in 5 Midwest States, 1955-56

Association code number	Proportion of patrons with accounts receivable at end of fiscal year	10 largest accounts receivable			Proportion of accounts receivable under 30 days	
		Proportion of total amount of accounts receivable in 10 largest accounts	Proportion of total number of accounts represented by 10 largest accounts	Proportion of total sales made to 10 largest account holders	10 largest accounts	All accounts
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
1	(1)	24	(1)	2.1	20	28
2	33	13	5.0	3.4	(1)	65
3	(1)	(1)	(1)	(1)	(1)	(1)
4	16	46	7.5	7.2	76	76
5	28	14	2.2	1.6	(1)	(1)
6	15	9	4.4	2.7	98	64
7	23	25	3.5	3.5	9	20
8	19	25	4.5	12.7	59	58
9	35	30	3.3	7.5	38	28
10	27	33	6.4	(1)	5	24
11	13	31	4.2	5.0	16	31
12	15	48	12.8	4.4	3	21
13	55	29	6.1	14.7	53	55
14	40	26	3.4	8.8	18	25
15	33	35	7.2	6.5	31	51
16	38	25	3.3	4.8	8	28
17	44	21	5.7	5.3	(1)	(1)
18	36	12	1.3	(1)	36	49
19	22	39	9.0	7.6	9	18
20	18	(1)	(1)	(1)	(1)	(1)
21	(1)	14	(1)	2.1	35	40
22	29	22	2.4	3.9	9	35
Average	28	26	5.1	5.8	31	40
Median	28	25	4.5	4.8	20	33

[1] Data not available.

TABLE 12.--Comparison of accounts receivable in supply cooperatives located in cash crop areas with those located in diversified farming areas, 1956-57

Cash crop areas			Diversified farming areas		
Association number	Average monthly accounts receivable as percent of total assets	Proportion of accounts under 30 days	Association number	Average monthly accounts receivable as percent of total assets	Proportion of accounts under 30 days
	Percent	*Percent*		*Percent*	*Percent*
3.....	7	(1)	1.....	28	28
4.....	14	76	2.....	28	65
9.....	30	28	5.....	25	(1)
10.....	18	24	6.....	5	64
11.....	6	31	7.....	14	20
12.....	13	21	8.....	16	58
13.....	17	55	16.....	21	28
14.....	17	25	17.....	18	(1)
15.....	16	51	18.....	13	49
			19.....	12	18
			20.....	16	(1)
			21.....	15	40
			22.....	24	35
Average.	15	39	Average.	18	40

[1] Data not available.

TABLE 13.--Comparison of accounts receivable in supply cooperatives where petroleum amounted to more than 70 percent of sales with cooperatives selling less than 70 percent petroleum, 1956-57

Petroleum more than 70 percent			Petroleum less than 70 percent		
Association number	Average monthly accounts receivable as percent of total assets	Proportion of accounts under 30 days	Association number	Average monthly accounts receivable as percent of total assets	Proportion of accounts under 30 days
	Percent	*Percent*		*Percent*	*Percent*
1.....	28	28	4.....	14	76
2.....	28	65	7.....	14	20
3.....	7	(1)	8.....	16	58
5.....	25	(1)	11.....	6	31
6.....	5	64	15.....	16	51
9.....	30	28	16.....	21	28
10.....	18	24	17.....	18	(1)
12.....	13	21	19.....	12	18
13.....	17	55	20.....	16	(1)
14.....	17	25	21.....	15	40
18.....	13	49	22.....	24	35
Average	18	41	Average..	16	40

[1] Data not available.

Use of Credit Agencies

Most of the supply associations encouraged patrons to borrow from credit agencies in the community as a means of keeping receivables in the cooperatives to a minimum.

Borrowing to Pay Cash to Cooperatives

All associations expected a loss of business volume if they were to adopt a cash policy. While this may occur initially, experience of other associations shows they should be able to build back their volume if the costs of credit and the merits of a cash policy are pointed out to the patron. To be equitable all farmers must pay cash or a sufficient charge must be made for credit to handle it. If farmers find it profitable to borrow from established credit institutions and pay the cooperative cash, they are likely to do so.

As mentioned, average credit costs of the supply cooperatives amounted to $24.50 for each $1,000 of credit sales. Their credit sales were 66 percent of total sales, and the average length of time accounts receivable were outstanding was 2 months. The credit patrons stood only a part of the credit costs because such costs were included in total operating expenses and thus spread over total retail sales--both cash and credit. If these supply associations were to adopt a cash policy, the present cash patrons would gain in patronage refunds because their business has been absorbing 34 percent of the cooperatives' cost of handling credit.

Patrons who are using credit also could gain if the associations were to adopt a cash policy because they could borrow money at 7 percent interest for 2 months at a cost considerably less than they pay the supply cooperative for credit for a 2-month period. In fact they could borrow money for approximately 4 months and pay no more than the credit cost at the cooperative on its accounts which average 2 months outstanding. If they paid interest only on the unpaid or declining balances, this period would be about twice as long. This relationship of 4 months versus 2 months is the same as that indicated when the costs of borrowing are 7 percent for the patron and the credit costs are 13.4 percent on outstanding accounts for the cooperative.

The schedule below shows the costs of borrowing $1,000 at 7 percent interest on the face amount for varying lengths of time and the saving over the $24.50 cost for $1,000 of credit business at the cooperative:

Length of loan in days	Interest charge at 7 percent	Saving over credit cost of $24.50 at cooperative
60.....	$11.66	$12.84
90.....	17.50	7.00
120.....	23.33	1.17

The following tabulation illustrates the credit costs in 1956-57 of the farmer-owned supply cooperatives in this study and the average credit costs in 1957 of farmer-owned lending institutions in the same area:

Item	16 supply cooperatives	52 production credit associations
	Percent	
Interest.....	6.0	4.1
Extension....	1.2	
Bookkeeping	3.6	2.5[1]
Collection...	2.2	
Bad debts....	0.4	0.2[2]
Total cost to lender.....	13.4	6.9

[1] Combined operating expenses.
[2] Reserve for bad debts.

Costs of granting open account credit to farmers by supply cooperatives are higher than costs of making production loans by established lending agencies. As mentioned, credit costs of these cooperatives amounted to 13.4 percent of their

average accounts receivable, and patrons could have borrowed money from local lending agencies at about half this cost. Several factors account for the higher cost of credit in the local cooperatives:

(1) Interest costs--Interest rates paid for money by the local cooperatives are higher than interest rates paid by lending agencies. Cooperatives borrow from the Bank for Cooperatives or other lending agencies at about 6 percent interest; Production Credit Associations borrow from the Federal Intermediate Credit Banks at less than half this cost; and local banks have "interest free" deposits to lend.

(2) Costs of extending credit--Credit extension costs are greater for the local cooperatives because credit is extended daily on open accounts in relatively small amounts for short periods. PCA's and banks lend money only in sizable amounts for several months or a year. Many more transactions, therefore, occur per $100 of credit at the cooperatives than at credit agencies.

(3) Bookkeeping and collection--These costs are greater at the cooperatives for the same reasons as those listed for credit extension. Also, the accounts at cooperatives are unsecured.

(4) Bad debt losses--Such losses are greater in the cooperatives because loans are unsecured and often no definite repayment schedule is designated.

(5) Specialization--The management and employees of farm supply cooperatives are trained to purchase and distribute farm supplies to patrons, while those of credit agencies are trained to lend money on a sound and efficient basis.

Greater Use of Credit Agencies Possible

Farmers generally did not borrow from credit agencies to pay cash at the cooperatives, though nearly all managers advocated this. The primary reason patrons did not do this was because the cooperative did not make any charge for the credit it granted.

Managers of eight associations encouraged the use of the Production Credit Associations supervised by the Farm Credit Administration. Two of the managers indicated however, that PCA's were too far away. Five associations worked closely with rural credit unions, but managers said patrons did not use them extensively in order to pay cash to the cooperative. Borrowing from local banks was recommended by several associations.

Six managers indicated that they could and should devote more effort to encouraging farmers to obtain loans from established credit agencies. Three associations indicated that more farmers would use credit agencies if the cooperative would begin charging for credit it extends.

Managers of three associations believed that local credit agencies were doing everything possible to get patrons of supply cooperatives to use their services. Several managers were of the opinion that more farmers would borrow from credit agencies if these agencies would promote their lending services. One manager said more farmers would use loans if mortgages were not required.

Area Comparisons

Three areas in this credit series have been completed to date. A comparison of some of the credit operations of farm supply cooperatives in the three areas is shown in the tabulation on page 29. Area I includes Michigan, Ohio, Indiana, and Pennsylvania. Area II is comprised of four northwestern States--Washington, Oregon, Idaho, and Utah. Area III is comprised of the States in this study.

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Item	Areas I	Areas II	Areas III
For 5-year period studied[1]		*Percent*	
Increase in farm supply sales	12	20	30
Increase in accounts receivable	62	92	71
For last year of study[1]			
Proportion of retail sales on credit	65	68	66
Percent of total retail sales in accounts receivable at year-end	4.5	7.8	6.3
Percent of credit sales in accounts receivable at year-end	6.6	12.0	9.5
Proportion of accounts receivable under 30 days of age	47	40	41
Proportion of assets in accounts receivable at year-end	10	14	10
		Days	
Number of days' retail sales in accounts receivable at year-end	14	23	19
Number of days' credit sales in accounts receivable at year-end	25	46	41
Number of days' credit sales in average accounts receivable	34	55	60
		Dollars	
Estimated cost of credit per $100 of credit sales	1.70	2.27	2.45
Estimated cost of credit per $100 of average accounts receivable	16.80	13.30	13.40
		Number	
Number of associations included in each study	8	11	22

[1]Areas I and II covered period from 1951-52 to 1955-56. Area III covered period from 1952 to 1956.

The associations in Area III did a better job of controlling credit, according to most of these measures, than associations in Area II, but did not do as well in most respects as associations in Area I.

Sales in Area III increased more rapidly, during the last 5 years than in either of the other areas. They were up 30 percent compared to 20 percent in Area II and 12 percent in Area I. The proportion of sales on credit was about the same in all three areas, but year-end accounts receivable increased 71 percent during the last 5 years in Area III compared to 62 percent in area I and 92 percent in Area II. Days' sales in accounts receivable at year-end also were about midway between Area I and Area II and the age of accounts was about the same as in Area II but less current than those in Area I.

Costs of handling credit in this area were almost 10 percent higher than in Area II and 45 percent higher than such costs in Area I.